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Dear Josh,

I have just run across a paper on the penetration of rock cores by bacteria in drilling mud (Smirnova, Microbioliya 26:717, 1957, AIBS translation) and find to my surprise that the presence of viable bacteria in ancient rock is taken quite seriously, this paper being a guide to the avoidance of contamination.

The possible bacterial content of rocks bears on the problem of meteoritic inocula, and ought to be settled. I think contamination is surely the explanation both for terrestrial rocks and meteorites; mean lifetimes of the order of 10^7 years would be required. Do you know of any experiments by people aware of the pitfalls? If not they ought to be done. (1)

I have just done a pair of monozygotic A_1 twins, and they are concordant in proportions of A_2 and O cells! (2)

Regards,

(2) . . . not done?

Tim Atwood

(1) Opparin discusses this in his 3d edition, pp. 53ff. almost certainly the ancient bacteria are immigrants of recent origin. I don't know of anything at all recent except Hippmann's not very well credited claims for coal. It would be hard to accept such long lifetimes, but how to be sure? What rocks would you use that have not been overheated, and have not been percolated by groundwater at any recent time? The results of cores in Arctic glaciers have been disappointing.

Yours
Joshua.